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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,131	01/20/2004	Kohei Mori	SON-2896	6646
23353	7590	11/10/2005	EXAMINER	
RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			CHEN, SHIH CHAO	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/759,131

Applicant(s)

MORI, KOHEI

Examiner

Shih-Chao Chen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 8-11 is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ying et al. (U.S. Patent No. 6,650,294).

Regarding claim 12, Ying et al. teaches in figures 3-7 a flat antenna, comprising: a feed conductor [420] between a first non-feed conductor [410] and a second non-feed conductor [430], wherein each of the first and second non-feed conductors is adapted to control the frequency band of the flat antenna [400].

Regarding claim 13, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: the feed conductor [420] includes a radiating element that is adapted to facilitate communication by electromagnetic radiation.

Regarding claim 14, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: the feed conductor [420] is formed in a meandering shape (See col. 10, lines 44-45).

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Regarding claim 15, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: a resonant frequency of the flat antenna [400] changes with the length of the feed conductor [420] (See col. 10, lines 24-43).

Regarding claim 16, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: a resonant frequency of the flat antenna [400] changes with the width of the feed conductor [420] (See col. 10, lines 24-43).

Regarding claim 17, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: a dielectric [445, 450] is between the feed conductor [420] and the first and second non-feed conductors [410, 430].

Regarding claim 18, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: a dielectric [445] is between the feed conductor [420] and the first non-feed conductor [410].

Regarding claim 19, Ying et al. teaches in figures 3-7 the flat antenna according to claim 18, wherein: the first non-feed conductor [410] is adapted to lower the resonant frequency of the flat antenna [400].

Regarding claim 20, Ying et al. teaches in figures 3-7 the flat antenna according to claim 18, wherein: an edge of the first non-feed conductor [410] is off-set from an edge of the feed conductor [420].

Regarding claim 21, Ying et al. teaches in figures 3-7 the flat antenna according to claim 18, wherein: the dielectric is glass epoxy resin (It is inherently to have the dielectric is glass epoxy resin).

Regarding claim 22, Ying et al. teaches in figures 3-7 the flat antenna according to claim 12, wherein: a dielectric [450] is between the feed conductor [420] and the second non-feed conductor [430].

Regarding claim 23, Ying et al. teaches in figures 3-7 the flat antenna according to claim 22, wherein: the second non-feed conductor [430] is adapted to lower the resonant frequency of the flat antenna [400].

Regarding claim 24, Ying et al. teaches in figures 3-7 the flat antenna according to claim 22, wherein; the dielectric is glass epoxy resin (It is inherently to have the dielectric is glass epoxy resin).

***Allowable Subject Matter***

3. Claims 6 and 8-11 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claim 6 is the inclusion of the limitation of the resonant frequency of the flat antenna is variably controlled by varying the inductance of the matching coil and the capacitance of the variable capacitance diode based on the matching control signal. It is this limitation found in the claim, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for the allowance of claims 8-11 is the inclusion of the limitation of the resonant frequency of the flat antenna is variably controlled by varying the group including the inductance of the matching coil and the capacitance of the

variable capacitance diode. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

***Response to Amendment***


5. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Shih-Chao Chen

**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

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Primary Examiner  
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SXC  
November 8, 2005